

AUDIO

FAQ

Q What is an XLR microphone input, and can I use an XLR microphone with the mini-jack inputs on normal sound cards?

A XLR microphone connections are a rugged, three-pin interface designed for musicians and broadcasters. Microphones designed to plug into a mini-jack socket are generally aimed at computer users, so if you want to use a high-quality microphone, you'll need a sound card with an XLR input such as the Tapco Link.USB, reviewed right.

XLR connections can also provide phantom power, whereby a 48V DC current is sent back up the cable to power the microphone. This type of power is required only by capacitor microphones, which tend to be more sensitive and detailed than dynamic microphones. They're more fragile, though, so are less suited to stage use.

You may be able to find a converter cable to plug an XLR dynamic microphone into a mini-jack socket, but the quality of the mini-jack mic input probably won't do the microphone justice.

Ben Pitt

Music and photography expert

ben@computershopper.co.uk

TAPCO Link.USB

★★★★★

£99 inc VAT

Integrated motherboard audio is perfectly sufficient for most PC users, but Tapco's Link.USB has a range of musician-friendly features you won't normally find in a PC. In some ways, it's simpler than integrated audio chips, with no surround sound and no 3D effects to make games sound more exciting. However, the stereo input and output are better specified than usual, supporting sample rates up to 96kHz, 24-bit and accommodating a range of input sources.

The input sockets accept XLR and quarter-inch (6.3mm) jack cables, the former for use with upmarket microphones, and the latter for line-level sources and electric guitars. A switch activates phantom power for use with capacitor microphones (see the FAQ, left). The output is on a pair of quarter-inch jacks and there's a dedicated headphone output on the front of the unit. There's a series of volume controls for the left and right inputs, main and headphone outputs and also for how much of the input is sent directly to the output – a handy feature for hearing what you're doing while recording.

The unit is powered by its USB connection and works perfectly happily with Windows' USB audio drivers. However, installing the supplied software gives access to audio stream input output (ASIO) drivers, which provide much lower latency in compatible music-production software.

Mackie Tracktion 2 (reviewed in *Labs*, *Shopper* September 2006) is also supplied on the disc. It's an



excellent audio and MIDI sequencer with ASIO support that costs around £110 on its own. Sadly, though, this version is missing many of the plug-ins included with the boxed version.

The inputs are a little noisier than ideal, measuring -60dB at typical gain settings, and the headphone output distorts at high volume, but otherwise audio quality is hard to fault. It's certainly up to the task of making high-quality demos. The default latency of 3ms when using the ASIO driver is impressive, making it viable to record a guitar and monitor the effected output with barely any appreciable delay.

The combination of phantom-powered microphone inputs, hardware volume controls, high sound quality and efficient ASIO performance makes this an

excellent package for anyone who wants to make music on their PC and incorporate live instruments. There are a few similar products available from M-Audio, Tascam, Edirol and others, but the Link.USB's excellent software helps it stand out. Only a lack of MIDI in and out prevents it getting full marks.

Ben Pitt

SUMMARY

- ✓ High-quality, well-conceived hardware
- ✓ Excellent bundled software
- ✗ No MIDI sockets

USB AUDIO INTERFACE Stereo mic/line inputs, line and headphone outputs, USB interface. Requires Windows XP SP2 or Mac OS X 10.3
PART CODE 501505642
SUPPLIER www.dv247.com
DETAILS www.tapcoworld.com

Also consider...

PHILIPS SLA5520

★★★★★

£84 inc VAT

PHILIPS Philips' SLA5520 takes music from your PC via a wireless network and plays it on your hi-fi. It comes with Philips' own server program, but you can also use it with Windows Media Connect.

The SLA5520 is quite a basic device, but it's a great buy if you want an easy way to play your music wirelessly.



WIRELESS NETWORK MUSIC PLAYER Supports MP3, Wav, WMA, WMA-DRM, 802.11g interface, WEP or WPA encryption, 3.5mm socket audio output. Requires Windows 2000/XP
SUPPLIER www.savastore.com
DETAILS www.philips.com
✓ Good value ✗ Screen hard to read
FULL REVIEW Jul 2006

LOGITECH X-230

★★★★★

£26 inc VAT

LOGITECH Logitech's X-230 were the most affordable 2.1 channel speakers in our recent Labs test, but they sounded better than much more expensive competitors. Each satellite's drivers are visible through a cloth net covering, while the compact subwoofer is protected by a sturdy metal grille.

These speakers could do with a second audio input, longer cables and an easy to reach bass level control, but they're outstanding for this price. Though not amazingly loud, they look superb and produce detailed and balanced sound.



2.1 SPEAKERS Line input, 32W RMS power
PART CODE 970123-0120 SUPPLIER www.amazon.co.uk DETAILS www.logitech.co.uk
✓ Excellent sound ✗ Only one input
FULL REVIEW Apr 2006

LOGITECH Z-5450

★★★★★

£199 inc VAT

LOGITECH Logitech's Z-5450 5.1 surround-sound speakers transmit sounds to the rear set wirelessly, so you'll have less clutter in your living room. Sound quality is excellent and the speakers are loud.

With loads of inputs and a decoder, these speakers are perfect for your PC or DVD player.



5.1 SPEAKERS Three line inputs, one coaxial and two optical digital inputs, 315W RMS power
PART CODE 970191-0120 SUPPLIER www.dabs.com DETAILS www.logitech.co.uk
✓ Sound great; loads of features ✗ Expensive
FULL REVIEW Dec 2006

TERRATEC Headset Master 5.1 USB

★★★★

£45 inc VAT



This headset claims to give a true surround-sound experience. Rather than using psycho-acoustic digital processing to simulate a surround effect (as is used by Dolby Headphone technology), it has six speakers built into the headset. The result is arguably more effective than digital processing alone, but only to a point.

As there's no centre speaker dangling in front of the listener's nose, the headset must still simulate the centre channel. As a result, dialogue in DVDs is positioned vaguely. The subwoofers (one for each ear) include a Bass Shaker effect, which attempts to capture the rumble of low bass, but just gave our earlobes a surreal tickling.

The headset is comfortable to wear and its USB port, in-line controls and software control panel utility make it simple to use. Sound quality is distinctly unimpressive, though, and the detachable microphone is hopelessly quiet.

Ben Pitt

SUMMARY

- ✓ Convincing surround effect
- ✓ Simple to connect
- ✗ Mediocre sound quality

SURROUND-SOUND HEADSET 48kHz sampling/playback frequency, USB Hi-Speed interface. Requires Windows 2000/XP
PART CODE 4017273103556
SUPPLIER www.amazon.co.uk
DETAILS www.terratec.co.uk

IRIVER Clix 4GB

★★★★★

£149 inc VAT



Iriver's Clix is an update to the U10, which won a Most Wanted award in our Labs test of MP3 players in *Shopper*, June 2006. The new model costs about the same and has four times the capacity, but £149 is expensive for a 4GB player by today's standards. However, there are a few justifications for its price. The minimal design looks fantastic, and to navigate menus you rock the colour screen in one of four directions. An FM radio, games and a voice recorder are built in.

The screen displays album artwork, JPEG images and MPEG4 videos. USB transfers are handled by Windows Media Player 11 and, at 3.12MB/s, are twice as fast as the U10. Sound quality of player and headphones is excellent, with plenty of bass on tap and no distortion.

With smart controls, well-organised menus and superb sound quality, the Clix is a joy to use.

Ben Pitt

SUMMARY

- ✓ Superb sound quality
- ✓ Feature packed
- ✗ Relatively expensive

MP3 PLAYER 4GB capacity, supports MP3, WMA and WMA-DRM audio, JPEG image and MPEG4 video formats, USB Hi-Speed interface
PART CODE CXW-4G
SUPPLIER www.advancedmp3players.co.uk
DETAILS www.iriver.com

PERFORMANCE (see page 56)



CHOOSING AN... MP3 Player

Follow the steps to find your ideal specs

CAPACITY: 512MB

TECHNOLOGY: Flash memory

INTERFACE: USB Hi-Speed

BATTERY: Disposable

SUPPORTED FORMATS: MP3, WMA

Recommended minimum in grey

1 Above you'll see a typical specification for an MP3 player that costs £30. Using flash memory means it can be very small and light, but its 512MB capacity provides room for just a few albums of MP3s encoded at 128Kbit/s. It's worth buying a player with 1GB or more to provide greater listening choice while on the move.

Cheap players often cut corners when it comes to sound quality, so approach these with caution. Flash-based players aren't sensitive to shocks or bumps, so they're ideal if you want to use them while jogging.

2 If you don't mind something bulkier, consider devices that use alternative storage technology. Hard disk-based players have up to 60GB capacity, so they can hold hundreds of albums; prices start at £150. Players based on tiny 1in hard disks of between 1.5GB and 8GB capacity cost from £100, and provide an excellent balance of portability and capacity. Hard disk players are sensitive to shocks and can be damaged if dropped, so you need to take care of them.

3 You'll need a PC to upload files to your MP3 player. A USB Hi-Speed interface will let you upload files a lot quicker than using a USB 1.1 connection.

4 Battery life varies between two and 50 hours. Hard disk players are the most power-hungry and benefit from a lithium-ion battery, which is light and easy to recharge.

If you will be away from a power supply for long periods, look for a player with a replaceable battery so you can carry spares.

5 If you want to download files from online music stores, you'll need a player that supports protected tracks. If you've got an iPod it will play only tracks purchased from the iTunes Music Store. If you've got a different player, make sure it plays protected WMA files. If a player is certified with the Plays For Sure logo it will play all protected WMA files available from the biggest music stores.

LOGITECH AudioStation

★★★★★

£129 inc VAT



Logitech's AudioStation is a mid-range iPod speaker dock, but it sounds better than many that cost more. It's the only dock we've tested with an FM tuner, a sensible addition given no iPod has its own. You can't synchronise a docked iPod with your PC, but the AudioStation is great value, and the first iPod dock to deserve our Best Buy award.



IPOD DOCK STEREO SPEAKERS iPod dock connector and 3.5mm stereo line input, composite/S-video outputs, FM radio, 80W RMS power PART CODE 970217-0120 SUPPLIER www.savastore.com DETAILS www.logitech.co.uk
✓ Clear, loud sound ✗ No iPod PC connector FULL REVIEW Jan 2007

SANDISK Sansa e270

★★★★★

£117 inc VAT



Sandisk's Sansa e270 has 6GB of storage, but it costs about the same as Apple's 4GB iPod Nano. Unlike the Nano, it can play back video files on its colour screen; its software makes it easy to convert and transfer them. It isn't as easy to use as an iPod, but its good battery and sound make it a great choice.

FLASH MP3 PLAYER 6GB capacity, supports MP3, WMA and WMA-DRM music, JPEG/bitmap picture files and proprietary video files, USB Hi-Speed interface PART CODE SDMX4-6144
SUPPLIER www.amazon.co.uk
DETAILS www.sandisk.co.uk

- ✓ Lots of space; good sound
- ✗ Nano has better controls

FULL REVIEW Feb 2007



APPLE iPod Shuffle

★★★★★

£50 inc VAT



Apple's tiny iPod Shuffle is affordable and beautifully designed. It's light, with an integrated metal clip that grips clothing securely. The controls are basic: there is just track skip. Battery life and sound are both good, though, so it's a great player if you can live without a screen and don't mind using iTunes.

FLASH MP3 PLAYER 1GB capacity, supports MP3, AAC, protected AAC, Wav, AIFF, audible and Apple lossless music, USB Hi-Speed interface PART CODE MA564ZT/A SUPPLIER www.amazon.co.uk DETAILS www.apple.com/uk

- ✓ Tiny; great design
- ✗ No display

FULL REVIEW Feb 2007

